

20070828.ba v04_n083.bam.20070828

>From ???@??? Tue Aug 28 10:23:10 2007 -0500
Date: Tue, 28 Aug 2007 10:21:51 CDT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4083
Message-Id: <20070828152152.E73DB318107@srvr1.theporch.com>

BOATANCHORS Digest 4083

Topics covered in this issue include:

- 1) Re: Kicking the 6AH6 dead horse (long winded harangue)
by "Tom Rauch" <w8ji@contesting.com>
- 2) Re: [Boatanchors] Questions on AN/GRR-5 Receiver
by WA5CAB@cs.com
- 3) Re: My HRO story
by "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>
- 4) RP-6 sought
by stuck in 50s <polepeeg@aa4rm.ba-watch.org>
- 5) Re: Kicking the 6AH6 dead horse (long winded harangue)
by stuck in 50s <polepeeg@aa4rm.ba-watch.org>
- 6) Re: RP-6 sought
by john <johnmb@nc.rr.com>
- 7) Re: My HRO story
by wb3fau@att.net
- 8) Re: Kicking the 6AH6 dead horse (long winded harangue)
by "Tom Rauch" <w8ji@contesting.com>
- 9) More noise figures
by Scott Robinson <spr@earthlink.net>
- 10) Re: Kicking the 6AH6 dead horse (long winded harangue)
by "Arden Allen" <gumbear@pacbell.net>
- 11) Re: No doghouse, but a dog's breakfast
by <vancleef@eskimo.com>
- 12) Big Shelby NC hamfest this weekend
by "Nick England" <nick@3rdtech.com>
- 13) Re: Kicking the 6AH6 dead horse (long winded harangue) - correction
by "Arden Allen" <gumbear@pacbell.net>
- 14) Re: Big Shelby NC hamfest this weekend
by "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>
- 15) Re: Kicking the 6AH6 dead horse (long winded harangue) - correction
by "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>
- 16) For Sale - McElroy MT-35 transmitter
by "Art Lebermann" <artleb@earthlink.net>
- 17) PARTS FS
by "K0DAN" <k0dan@comcast.net>
- 18) AWA Museum

by "Freeberg, Scott (STP)" <Scott.Freeberg@guidant.com>

Message-ID: <003d01c7e799\$21931b90\$640fa8c0@radiatoroom>
From: "Tom Rauch" <w8ji@contesting.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sun, 26 Aug 2007 00:25:21 -0400
MIME-Version: 1.0
Content-Type: text/plain;
 format=flowed;
 charset="iso-8859-1";
 reply-type=original
Content-Transfer-Encoding: 7bit

>> Now if you haven't already put your head scratcher to
>> work let me remind you
> that so-called non-linear amplifiers act as linear
> amplifiers when driving
> tank circuits, the tuned RF and IF coils and transformers
> needed for
> selectivity (think class B linear amplifier). Tanks
> circuits maintain
> linearity by virtue of their "flywheel" energy storage
> property regardless
> of the linearity of the driving amplifier.

Not quite. I'd hate to see people thinking they can clean up a non-linear amplifier by increasing tank Q. The only way that happens is if the bandwidth of the filter approaches the bandwidth of the signal. In that case the stage causes distortion but the products are filtered, so it will not clean up odd-order products or distortion outside of the signal bandwidth caused by a non-linear amp.

The only thing the selective tank does is reduce out-of-band even order or harmonic distortion products.

The thing we are after in most amplifiers is generally a linear transfer function, or at least one with a non-linearity that follows a slope that doesn't produce high levels of odd-order products. What's important is the ratio of input signal to output signal. That can't be cleaned up with tank Q, and it is generally not affected by tank Q except as the higher Q might reduce out-of-band signal levels.

I can, for example, measure the "splatter" or odd-order IM products of a 40 meter PA stage and change the tank Q from the minimum needed Q for matching to a Q in the hundreds and not see any change in distortion products on the signal. The 20 meter signal however, which is harmonic or even order distortion, will of course be improved.

This is an important distinction to remember when we are elemerring new hams because people often think a ratty cheap transistor CB amplifier can be cleaned up for SSB use with the addition of an output filter. That would only work if the output filter was 3kHz wide, and you would STILL have intermodulation distortion within that 3kHz .

Another misplaced idea is a push-pull RF amp has better transfer function or linearity. I've seen our amateur radio equivalents of Audio-phools think a push-pull SSB amp is cleaner sounding than a single ended amp. In band, it's all about the transfer function.

73 Tom

From: WA5CAB@cs.com
Message-ID: <c07.1c9a4a57.34025b4b@cs.com>
Date: Sun, 26 Aug 2007 00:27:55 EDT
Subject: Re: [Boatanchors] Questions on AN/GRR-5 Receiver
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: multipart/alternative;
boundary="part1_c07.1c9a4a57.34025b4b_boundary"

--part1_c07.1c9a4a57.34025b4b_boundary
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit

Dave,

You don't mention what supply voltage you are trying to operate the receiver from but as you mention a relay clunk, I assume 115 VAC. E-101, the Input

Vibrator, does not run when operating on 115 VAC. E-102, the Filament Voltage Vibrator runs off of the same supply that operates the relay, but through an NO contact on the relay. If K-101 pulls in, then CR-101 and C-101 must be working. If E-102 doesn't start, then that leaves L-108 or contacts 20/21 on K-101.

Check for around 6 volts on pin 4 of E-102. If present, E-102 is running or E-102 is bad. If not present, check the other side of L-108. If present, L-108 is open. If not present, check contacts 20 and 21 on K-101. If present on 21 and not on 20, the relay contacts are bad. If present on 20, start over. One of the previous steps was misdiagnosed.

However, the most common failures in the PP-308/URR are the vibrators (almost always fixable), the loudspeaker and the filament voltage rectifiers CR-102. The rectifiers are mounted in the rear of the cabinet and connected to the cabinet wiring harness. Check their front to back ratio, bearing in mind that the anodes are grounded. If they are bad, the recommended fix is to remove the leads from the two halves of the rectifier to pins 2 and 4 of P-101. Mount a bridge rectifier block to the rear wall of the power supply. Connect the AC input terminals of the bridge to pins 2 and 4 of J-101. Ground the negative bridge terminal. Leave the positive terminal unconnected. A PP-308 so modified will still work in an unmodified cabinet unless CR-102 is shorted, which isn't usually the case.

In a message dated 8/25/2007 10:21:09 PM Central Daylight Time, n7rk@cox.net writes:

> I have an AN/GRR-5 with a dead power supply. The relay clunks when
> turned on but the vibrators are not coming on. I have tested both
> vibrators and they are OK and all fuses are good.
>
> Any suggestions before I start tearing into this? I do have the manual.
>
> I seem to recall something like this with the AN/GRR-5 I had as a kid in
> the sixties but it's too long ago to recall what it was and the fix.
>

Robert Downs - Houston
<<http://www.wa5cab.com>> (Web Store)
MVPA 9480
<wa5cab@cs.com> (Primary email)
<wa5cab@comcast.net> (Backup email)

--part1_c07.1c9a4a57.34025b4b_boundary
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

* * * * *
* ---REMAINDER OF MESSAGE TRUNCATED--- *

* This post contains a forbidden message format *
* (such as an attached file, a v-card, HTML formatting) *
* Mail Lists at theporch.com only accept PLAIN TEXT *
* If your postings display this message your mail program *
* is not set to send PLAIN TEXT ONLY and needs adjusting *
* * * * *

--part1_c07.1c9a4a57.34025b4b_boundary--

Message-ID: <1653.66.56.28.127.1188125836.squirrel@fracas.netboobie.org>
Date: Sun, 26 Aug 2007 06:57:16 -0400 (EDT)
Subject: Re: My HRO story
From: "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: boatanchors@theporch.com
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit

> Well now heres an idea- just buy a stuffed dog at the toy store, take
> out the stuffing and put the power supply in the dog! Done deal!
>
>

asbestos dogs are tough to find

Date: Sun, 26 Aug 2007 13:06:11 -0400 (EDT)
From: stuck in 50s <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200708261706.17QH6B8g013193@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: RP-6 sought

It's the power supply in the rs-6 quad-ensemble

Have 3 of the 4 in running shape & can put these OTA given this
missing 'sardine can'

Have a xtra ratso rr-6a for possible trade

Anyone use these in qrp nets?

Tnx

Marty the 'rm

Date: Sun, 26 Aug 2007 13:24:55 -0400 (EDT)
From: stuck in 50s <polepeeg@aa4rm.ba-watch.org>
Message-Id: <200708261724.17QH0tw6013299@fracas.netboobie.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)

> Not quite. I'd hate to see people thinking they can clean up
> a non-linear amplifier by increasing tank Q. The only way
> that happens is if the bandwidth of the filter approaches
> the bandwidth of the signal. In that case the stage causes
> distortion but the products are filtered, so it will not
> clean up odd-order products or distortion outside of the
> signal bandwidth caused by a non-linear amp.

>
I don't get it

Distortion meters have attacked problem by correctly RC-notching out
waveform given (crudely) by a taylor series

$$V(t) = -V_1 \sin(\omega t) + V_2 \sin^2(2\omega t) - V_3 \dots$$

If $V(t)$ is itself a sine, then 1st term is same shape. & peaking rather
than notching wud kill the trash.

> (sic) RF-0-phools think p-p design a fix-up

Uhhhh, don't get this either. Combine above series w. it's negative
(other amp. element) & value of p-p vs single-ended evident. IE,
design cancels even harmonics.

Sri about formula-head bandwidth.

Marty

Message-Id: <6.2.1.2.2.20070826133106.030145b0@pop-server.nc.rr.com>
Date: Sun, 26 Aug 2007 13:32:32 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: john <johnmb@nc.rr.com>
Subject: Re: RP-6 sought
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

Let me know when you get yours on the air and we'll have the ensembles make
CW music on 40M Marty.... I've used mine OTA before. Cool little rigs!

John K5MO

At 01:06 PM 8/26/2007, stuck in 50s wrote:

>It's the power supply in the rs-6 quad-ensemble
>
>Have 3 of the 4 in running shape & can put these OTA given this
>missing 'sardine can'
>
>Have a xtra ratso rr-6a for possible trade
>
>Anyone use these in qrp nets?
>
> Tnx
>
> Marty the 'rm

From: wb3fau@att.net
To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>,
boatanchors@theporch.com
Subject: Re: My HRO story
Date: Sun, 26 Aug 2007 17:48:56 +0000
Message-Id:
<082620071748.9562.46D1BD07000E06F20000255A21602807489A0E00CC0D99@att.net>

Solid state the darn thing!

Message-ID: <004e01c7e822\$0edee810\$640fa8c0@radiatoroom>
From: "Tom Rauch" <w8ji@contesting.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sun, 26 Aug 2007 16:45:29 -0400
MIME-Version: 1.0
Content-Type: text/plain;
format=flowed;
charset="iso-8859-1";
reply-type=original
Content-Transfer-Encoding: 7bit

> I don't get it
>
> Distortion meters have attacked problem by correctly
> RC-notching out
> waveform given (crudely) by a taylor series
>

> $V(t) = -V_1 \sin(\omega t) + V_2 \sin^2(2\omega t) - V_3 \dots$
>
> If $V(t)$ is itself a sine, then 1st term is same shape. &
> peaking rather
> than notching wud kill the trash.

The problem with RF amplifiers in receivers or transmitters is about the same. There are two forms of distortion caused by nonlinearity. One is a transfer function problem in that the signal input to the stage does not track the output with a change (or slope if you plot it on a graph) that doesn't add excessive odd-order products.

Odd-order products (like $2F_1 - F_2$, $3F_1 - 2F_2$) wind up being inside or near the passband of the original signal, and can't be filtered or notched in the common case where there are many of them and they move around.

The only thing a high selectivity tank or filter does is clean out the out of passband crud.

The other issue is the harmonic distortion and that is generally a fractional cycle issue. Push pull or a more selective tank can easily filter that, even when harmonics or mixing products move around. They are far off frequency.

Say we have a nonlinear system with a signal on 7000 and one on 7003 kcs. The lowest odd order would be 6997 and 7006, tough to filter. If it is a voice transmitter 3kHz wide we might have a speech product with tones at 7001.5 and 7002 creating trash on 7001 and 7002.5, and that would be inside any SSB filter passband and not removable. That's the transfer function largely responsible for splatter and on frequency distortion. Push-pull or tank Q won't help.

Now the harmonic distortion and mixing products caused by fractional cycle distortion, like a half cycle conduction angle, produce junk way up around 14MHz and down near DC, so it is easily filtered. Push pull also helps.

Some audio freaks think a push pull RF amp helps on-channel or adjacent channel distortion, but it doesn't. On channel or near channel distortion is a transfer function problem while the push pull or higher Q tank fixes the stuff way out of band only, and that is mostly from fractional cycle distortion.

Some Hams using cheap CB amplifiers think a low pass will

cure the design problems causing splatter, but they can't.
Different problems.

That was my point.

73 Tom

Mime-Version: 1.0
Message-Id: <p06240800c2f7a4edd709@[192.168.1.2]>
Date: Sun, 26 Aug 2007 14:46:14 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Scott Robinson <spr@earthlink.net>
Subject: More noise figures
Content-Type: text/plain; charset="us-ascii" ; format="flowed"

>Hi Scott,
>
>Just for fun, could you please run the calculation
>for a 6DC6?
>Hmmm..... 6GM6 too?????
>
>Gary, R-390A owner

Sure:

6DC6 1828 ohms

6GM6 478 ohms

Regards,

Scott

Message-ID: <004201c7e852\$2fed1f60\$0f9e480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue)
Date: Sun, 26 Aug 2007 19:18:09 -0700
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 8bit

> > I don't get it ...

Let's look at it another way: Think of a sine wave with its negative half removed by distortion. In this case its a cycle of RF, say 7.29MHz. The harmonics (14.58MHz, ...etc.) generated (à la Fourier) fall outside the filter pass band. Output is a restored 7.29MHz sine wave.

Assuming the signal is previously amplitude modulated, the output contains an undistorted envelope. Good audio upon detection (rectification).

NOW, if the RF amp's transfer function is susceptible to change in the AUDIO frequency domain then the envelope can be modified, such as in the case of an amplitude modulated transmitter's final amplifier. HOWEVER, a receiver's RF amp should be immune to audio frequency domain effects so that a received signal passes without modulation being added. Important in hi-fi receivers. Unfortunately a grossly overloaded RF amp can have its operating conditions in the audio domain upset resulting in audio frequency modulation by the overloading signal.

Now you can see that distortion in the RF domain can be eliminated by RF bandpass filtering* while distortion in the AF domain cannot be filtered out. Filtering within the audio bandpass will itself be a form of distortion.

*The basic bandpass filter consists of an LC resonant "tank" circuit, also known as a single pole filter. See http://en.wikipedia.org/wiki/Tank_circuit.

Arden Allen
KB6NAX

From: <vancleef@eskimo.com>
Message-Id: <200708270621.XAA13009@eskimo.com>
Subject: Re: No doghouse, but a dog's breakfast
To: Old Tube Radios <boatanchors@theporch.com>
Date: Mon, 27 Aug 2007 00:21:45 -0600 (MDT)
Cc: boatanchors@theporch.com (Old Tube Radios)
MIME-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

The esteemed Morris Odell has said:

>
> Hi all,
>
> Well every collection needs one, and I finally got my first HRO! It looked
> pretty good from the outside and came with a set of 9 coil boxes and a
> homebrew PS. I bought it from someone about 1000 km away and last night,
> after a complicated set of travels and transactions, it finally landed on my

> bench.
>
> The outside hadn't travelled too badly over the last 70 years, but inside -
> yikes!! Some previous owner had decided to "upgrade" it from a 5 to a M so
> out went the 6/7 pin sockets, shields and tubes and in went a mixture of
> glass & metal octals, some with the horrible bivalve clipped shields that
> were used on the cheapest and nastiest plastic radios of the postwar era.
> There's a VR105 behind the S meter which was never installed at the factory.

(Not copying all of the original post)

Well, Morris, sounds you've got something to strip out and make your own "Heathkit" with. Since you're not starting with an "original," you've got the luxury of doing more-or-less what you want with the circuits inside.

I'm thinking here of the RME-45 that I rebuilt some years ago, and by the time I was done, the radio looks like a genuine RME-45, but there are major circuit changes, but it's "Hank's own version of what he thinks the original radio ought to have been." Things like reducing B+ out of the filter from 310 to 260, replacing the oscillator/mixer and RF preamp with hotter tubes, lowering front-end noise, reworking the power distribution to give much better stability, and reworking the S-meter circuit as a low-voltage bridge.

Compared to the 45, the original HRO design is very hard to fault. B+ at 230 volts/75ma. is nice, cool, and conservative, and well within the capabilities of an 80/5Y3 power supply. You can include the 0A2 in the front end B+ for both the local oscillator and the front end screens at a price I'd estimate to be 20 ma. more B+ drain.

You've got some very real advantages and freedoms with the HRO, and you'll note that the history of HRO designs was the same circuit for about 20 years. One key point is the use of a separate local oscillator tube and pentode mixer, so you don't have to play games with 6A7/8 (ugh!), 6SA7 (better, yeah but), 6K8 (vastly superior to 6A7/8, maybe better than 6SA7) or 6J8 (RCA's sop to the reverse grid configuration compared to 6K8, really good only in the loctal 7J7 version). Since you're starting with a separate LO and mixer, you're way ahead of the game.

More good news is that the performance is all in the coil set. And no matter what tube set (6-7 pin, octal, loctal, or 7-pin miniature), the coils don't really care much about the tubes used. I'd be inclined to stick with metal octals for the RF amp and mixer because the metals have button bases vs. long internal leads and press mount. The metals are self-shielding (ground pin 1) (useful for everything through the IF's). For the original 6C6 and 6D6, use 6J7 and 6K7.

Critical electrical parameters are screen grid voltages and priming bias (cathode resistor) values. As I recall, National company had a fixation on 70 volts vs. 100. Use the original parameters. Those pentodes don't really care what you have for plate voltage, so long as it's higher than the screen. Everything is in setting proper zero-signal cathode current with screen voltage and priming bias to match. The only reason for using more than 150-180 volts as B+ is to get more power out of the AF power amplifier---the rest of the set doesn't need it.

Original AF power tube was a 42. Electrically identical to 6F6, but you can use a 6K6 (reset the initial cathode bias) as plug-and-play, and while a 6V6 supposedly works into a lower load resistance, it will work in the circuit just fine with a proper class A bias voltage.

Pull off the IF transformers and check the coil terminations. If National wound them with Litzendraht, check the Q and/or just redo all the terminations. Use chemical stripper; mechanical will work-harden the wires and make them brittle. Also, clean up any solder flux with isopropyl alcohol or lacquer thinner. Make sure the coil pies and trimmers are clean.

I think that, for a power supply, to get down to 230 volts, a choke input filter behind an 80/5Y3 is a good way to go. Not only does it give much better regulation than capacitor-input, you're aiming for a low voltage for most power transformers to support with the voltage-boosting you get out of capacitor input.

On the VR tube, set the feed resistor so that the tube stays lit---on the low side. That will give you good life and lower dissipation. This was a major issue in the RME set---the original design ran about 130 ma. at 310 volts out of an 80, and getting it down to 95 ma. at 260 volts made the set quite stable from turn-on to hot-running. Needless to say, the 80 was much happier as well.

Just some quick thoughts on "what do I do with a generic HRO set?"

Hank

Date: Mon, 27 Aug 2007 11:11:19 -0400
From: "Nick England" <nick@3rdtech.com>
Subject: Big Shelby NC hamfest this weekend
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <0a6801c7e8bc\$85ea29c0\$2f0212ac@Heathkit2>
MIME-version: 1.0
Content-type: text/plain; charset=us-ascii

Content-transfer-encoding: 7bit

Boatanchorists from across the southeast and Mid-Atlantic will be gathering for the really big hamfest at Shelby NC this weekend. As usual a dozen or so of us will be located along the grassy road in the midway area - look for the big yellow "BOATANCHORS!" banner and say hello.

I will be looking for heavy grey stuff - tube-type post-war US Navy communication gear like WRR-2, FRR-59, WRR-3, SRR-13, FRR-23, FRR-24, SRT-14, WRT-2, URA-8 etc. Please let me know if you have anything interesting, like parts rigs, etc.

I plan to bring SX-42, NC-300, NC-303 to sell.

cheers,
Nick KD4CPL

Message-ID: <000f01c7e8dd\$cb7298d0\$4ca3480c@KB6NAX>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue) - correction
Date: Mon, 27 Aug 2007 12:09:14 -0700
MIME-Version: 1.0
Content-Type: text/plain;
 charset="iso-8859-1"
Content-Transfer-Encoding: 7bit

> Sorry to bug you, but a single LC is a 2 pole filter; a single RC is
> the single pole version.

Thankyou for the correction, Scott. I misread the Wiki article. I should have gone on farther to (regarding tank circuits):

"Second order filters are measured by their quality or "Q" factor. A filter is said to have a high Q if it selects or rejects a narrow range of frequencies compared with its centre frequency. Q is defined as central frequency divided by 3dB bandwidth."

Arden Allen
KB6NAX

Message-ID: <56636.76.17.125.245.1188255720.squirrel@fracas.netboobie.org>
Date: Mon, 27 Aug 2007 19:02:00 -0400 (EDT)
Subject: Re: Big Shelby NC hamfest this weekend
From: "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>

To: Old Tube Radios <boatanchors@theporch.com>
Cc: "Old Tube Radios" <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit

> Boatanchorists from across the southeast

Look for me 'n a Squires Sanders SS1R/scope FS on table in area

Marty the 'rm

Message-ID: <56639.76.17.125.245.1188256123.squirrel@fracas.netboobie.org>
Date: Mon, 27 Aug 2007 19:08:43 -0400 (EDT)
Subject: Re: Kicking the 6AH6 dead horse (long winded harangue) - correction
From: "Marty Reynolds' debris field" <polepeeg@aa4rm.ba-watch.org>
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit

The gift that keeps on giving

> Q is defined as central
> frequency divided by 3dB bandwidth."
>
that's how I learned but... 3db was called half-power bandwidth

Wiki does neat def on 'TOI' aka third order intercept. WHICH seems to be
inextricably
tangled here with RF rx amps/mixers & honkin' lean-year PAs. TOI DOES NOT
APPLY
to these latter

Warning: Wiki also uses Taylor Series in their discourse. & y'all only
thot Taylor made tubes
like the TZ20.

Message-ID: <380-22007822835854796@earthlink.net>
From: "Art Lebermann" <artleb@earthlink.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: For Sale - McElroy MT-35 transmitter
Date: Mon, 27 Aug 2007 20:58:54 -0700
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII

I'm posting this info for a friend, who is not a member of the list.

He is selling a very rare McElroy MT-35 transmitter, made in 1945. Yes - Ted McElroy, famous for his keys and other telegraph gear, actually attempted to enter the ham radio market at the end of WW2. He designed a 35 watt phone/CW transmitter, and produced a very small number of these rigs before running into severe financial problems. He then contacted Leo Meyerson (WRL), and offered him the design and enough parts to build 1500 units. Leo took him up on the offer, and - with a few minor changes - started manufacture of the transmitter in 1946. This was the birth of the first post-war World Radio Labs transmitter - the Globe Trotter.

How do I know all of this history? Well - I found one of these rigs in 2005, and it's now a very important part of my Boatanchor collection. I've done extensive research on the history, including a telephone conversation with Leo Meyerson to confirm the story. To the best of my knowledge, there are four of these transmitters in existence. I have one, and there is one in the AWA museum collection. The unit that is being offered for sale is in the collection of Tom French (W1IMQ), one of the best known authorities on McElroy telegraph equipment. Tom purchased his MT-35 to fill out his collection of "all things McElroy", but has now decided to sell the rig, as it really doesn't fit into a collection of vintage keys and bugs.

The transmitter is located in Stow, Mass. Tom is asking \$975. You can contact him by e-mail at artifaxbooks@yahoo.com

His phone number is (978) 562-5573

I have both the McElroy MT-35 and the WRL Globe Trotter in my collection. If you need info that Tom can't supply, I'll be glad to help. I have photos and documentation on both rigs.

73,
Art Lebermann
W6REQ

Message-ID: <018e01c7e928\$d023a8b0\$6601a8c0@K0DAN>
From: "K0DAN" <k0dan@comcast.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: PARTS FS
Date: Mon, 27 Aug 2007 23:02:26 -0500
MIME-Version: 1.0
Content-Type: text/plain;

format=flowed;
charset="iso-8859-1";
reply-type=response
Content-Transfer-Encoding: 7bit

I have a few parts from BC939 (?), BC610 (?), etc., which are surplus to my needs.

- a) Roller inductor, labeled L5, has about 5 turns of #12 (?) wire on approx 2" diameter ceramic core. \$15 + shipping
- b) Amperex VC-50 fixed vacuum capacitor, approx 6.5" x 2.5". \$20 + shipping
- c) Jennings VC12-20 vacuum capacitor, approx 6.5" x 2.5". \$20 + shipping
- d) Switch assembly: this is part of a bandswitch (?) assembly , and has abpprox 4.5" shaft with spring mechanism and cloverleaf cam. No wafers or switch contacts. Free, if available, with other items.
- e) Label plate, black, approx. 3.5" x 1", engraved with "Caution, before operation review TM-II-826 packd with equipment". Inlcudes screws & nuts. \$5
+ shipping.

Prices as listed, or \$45 + shipping for the whole kit & kaboodle. (And where else can you get a kaboodle for so cheap?)

Please contact me off-list if you can use any of these.

73

Dan
K0DAN

(k0dan at comcast dot net)

Content-class: urn:content-classes:message
MIME-Version: 1.0
Content-Type: text/plain;
charset="iso-8859-1"
Content-Transfer-Encoding: quoted-printable
Subject: AWA Museum
Date: Tue, 28 Aug 2007 10:21:28 -0500
Message-ID: <159D9606C7F1304C8059DAEB6B2ED8BE01BBEA6E@STPEVS01.ad.guidant.com>
From: "Freeberg, Scott (STP)" <Scott.Freeberg@guidant.com>
To: Old Tube Radios <boatanchors@theporch.com>

Last week I attended the Antique Wireless Association AWA Convention in Rochester NY. This was my first visit to the convention. One of the activities included a visit to the AWA Museum in East Bloomfield NY. =20

Holy moly. It was truly radio heaven! The ham shack is on the second floor and it is simply incredible! At the top of the stairs there were two homebrew low power Novice ham stations. They were set up on period desks with period lamps, clocks, and feel of a 40's station. They even had the builders log book there and open.

=20

Inside the first room was the spark stuff which was amazing. They would run it and hold the key down for several seconds for us to get pictures.

Lots of zzzzzttttttt sparks and noise and flashes. They had several spark stations from a 'qrp' transmitter with a itty bitty spark to a monstrous spark transmitter generating a scary amount of power :> I wonder if anyone on here has built a spark station.

=20

All around the room were homebrew 20's glowbug gear, transmitters, receivers. The walls were papered with 20's qsl cards. =20

=20

The main floor has an incredible collection of keys, tubes, and radio equipment. I got to pound out CQ on Hiram Maxim W1AW's morse code key. There just wasn't enough time to see everything.

=20

Next we went over to the AWA Annex which contains shelves stacked to the ceiling with old homebrew and commercial ham radios in one room, a whole room of military equipment, a whole room of TV, spark, etc. Plus I got to sit at the mic of James Millens homebrew KW transmitter and HRO receiver.

=20

With me being a 20's and 30's glowbug enthusiast, the museum was the most wonderful and inspiring radio experience I've ever had. If you get the chance, I'd highly recommend a visit. =20

=20

Another wonderful experience was the fresh homemade peach pie at the Holloway House across the street from the museum :>

=20

The museum & annex were open for only 2 hours that night so we only had an hour at the museum and an hour at the annex. I could have easily taken the whole day at just the museum! and still not have seen everything. =20

One of my goals at the museum was to see a real Grebe CR-18 and Pilot Super Wasp in person. They had em and I spent some time looking them over and taking pictures. I just love the styling of the CR-18. The insides seem kind of quiet with a detector and 1 audio stage. IS anyone here using a CR-18 on the air? I'd like to hear about its performance. =

The Pilot Super Wasp was less impressive than the CR-18 on styling but = more impressive inside. The Super Wasp appears to be well built, with = separate aluminum box shields for the detector and tuned RF front end, = plus two stages of audio. Can anyone report on the Super Wasp = performance? I'm in the process of acquiring a Super Wasp but don't = have any leads on a CR-18. I'm looking to use them regularly with my 29 = transmitters. Any leads would be appreciated on the CR-18.

I saw a radio in the flea market, already purchased, that really tugged = at me. IT was a Browning Drake breadboard receiver called a = Regeneformer or something like that, with the outboard audio assy. What = a beauty.

Now that I'm all wound up on 20's and 30's glowbug radios after visiting = the museum, I'm looking for a few parts to build my next 29 projects. If = you can help me out, I'd appreciate it. I'm looking for some nice = Cardwell and National DX variable capacitors, some Pilot variables, some = National style tube shields (with bases) like those used in the National = SW-5 and SW-3 and FB-7 and HRO Jr and HRO Senior and HRO5T, etc, Pilot = coils or coil forms, and some of those round National IF transformers = and BFO coil (like those in the FB-7 and HRO) for a superhet project. = I'd like to find a couple more blue beehive insulators as well for a PP = self exciting oscillator using a 1/4" copper tube tank coil. Thanks.

=20

73, Scott WA9WFA

End of BOATANCHORS Digest 4083
